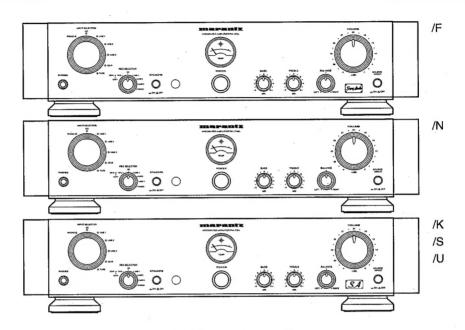
# Service Manual

**PM17A** /F1N, /K1G, /N1G, /S1G /N1B, /U1B

# Integrated amplifier



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Please use this service manual with referring to the user guide (D.F.U.) without fail. 修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。



**PM-17SA / PM-17mkll** 



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Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

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The following information must be supplied to eliminate delays in processing your order:

- 1. Complete address
- 2. Complete part numbers and quantities required
- 3. Description of parts
- 4. Model number for which part is required
- 5. Way of shipment
- 6. Signature: any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

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633 GRANITE COURT, PICKERING, ONTARIO L1W 3K1

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#### JAMO AUSTRALIA PTY LTD

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## MRZ STANDARD CO.,LTD

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## SINGAPORE

## WO KEE HONG (S) PTE LTD

WO KEE HONG CENTRE NO.23, LORONG 8, TOA PAYOH SINGAPORE 319257

PHONE: +65 2544555 : +65 2502213

## TAIWAN -

#### PAI- YUING CO., LTD.

6 TH FL NO. 148 SUNG KIANG BOAD.

TAIPEL 10429, TAIWAN B.O.C. PHONE: +886 - 2 - 25221304 FAX : +886 - 2 - 25630415

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SUITE 8.1. LEVEL 8. MENARA GENESIS. NO 33 JALAN SULTAN ISMAIL 50250 KUALA LUMPUR MALAYSIA

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#### JAPAN Technical

#### MARANTZ JAPAN, INC.

35- 1, 7- CHOME, SAGAMIONO SAGAMIHARA - SHI, KANAGAWA JAPAN 228-8505

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営業本部 〒150-0022 東京都渋谷区恵比寿南1-11-9

## KOREA

#### MK ENTERPRISES LTD.

ROOM 604/605, ELECTRO-OFFICETEL, 16-58, 3GA, HANGANG-RO, YONGSAN-KU, SEOUL

KOREA

PHONE: +822 - 3232 - 155 : +822 - 3232 - 154 FAX

### SHOCK, FIRE HAZARD SERVICE TEST:

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins ( with unit NOT connected to AC mains and its Power switch ON ), and the face or Front Panel of product and

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

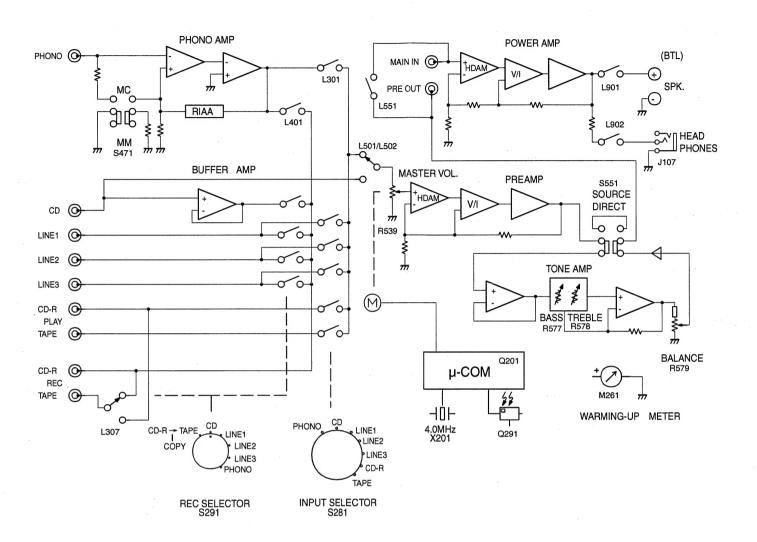
In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

## 1. TECHNICAL SPECIFICATIONS

Rated power output (20 Hz to 20 kHz, 2CH simultaneous drive)	
	80 W x 2 (6 Ω load)
	100 W x 2 (4 Ω load)
Total harmonic distortion (20 Hz to 20 kHz, 2CH drive, 8 $\Omega$ load)	0.01 %
Cross-modulation distortion (SMPTE)	0.01 %
Output bandwidth (8 Ω load, 0.04 %)	10 Hz to 50 kHz
Frequency response (CD, SOURCE DIRECT)	
Damping factor (8 Ω load, 20 Hz to 20 kHz)	
Input sensitivity/input impedance	
PHONE (MC)	230 uV/100 O
PHONE (MM)	
HIGH LEVEL	
MAIN IN	1.6 V/22 KS2
Output voltage/output impedance	
PRE OUT	1.6 V/250 Ω
Maximum allowable PHONE input (1 kHz)	
MC	
MM	150 mV
RIAA deviation (20 Hz to 20 kHz)	±0.2 dB
S/N (IHF A network, input shorted)	
PHONE (MC)	76 dB
PHONE (MM)	90 dB
HIGH LEVEL	
Tone control	
BASS (100 Hz)	±8 dB
TREBLE (10 kHz)	
Complex self-age	
F version	100 V AC 50/60 Hz
/K1 version	
/N1, /S1 version	
/U1 version	
Power consumption	180 W
Dimensions ( Maximum )	
Width	
Height	
Depth	429 mm
Weight	16 kg
Accessories	
Remote control unit (RC-17mkIIPM)	x 1
Dimensions	
Width	44 mm
Height	
Depth	
Weight (without batteries)	
SUM-4 (R6/ "AA" size) dry cell battery	
COM TITLE 701 SIZE OF BUILDING THE SIZE OF SIZ	, , , , , , , , , , , , , , , , , , ,

Design and specifications are subject to change without notice.

## 2. BLOCK DIAGRAM

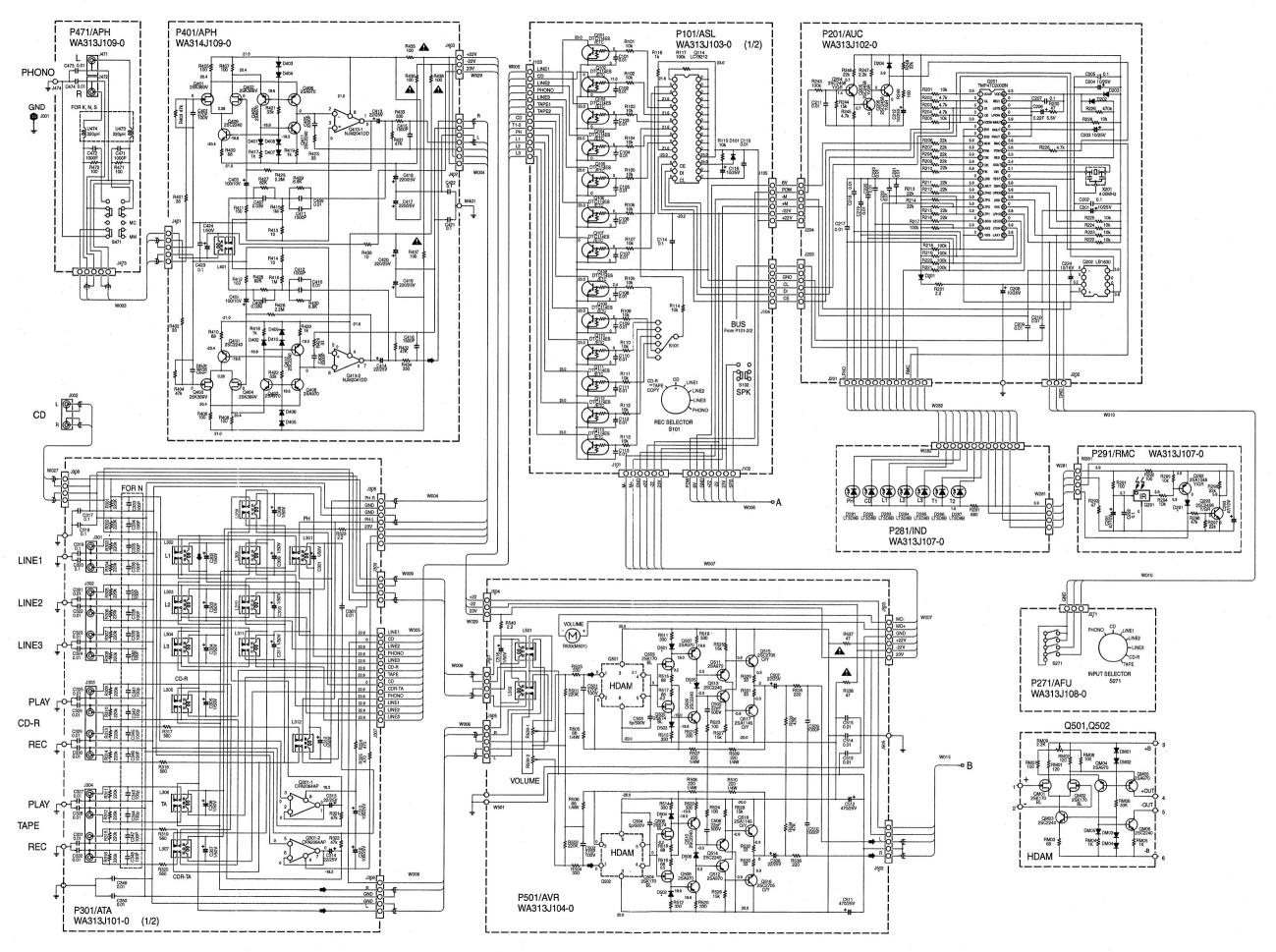


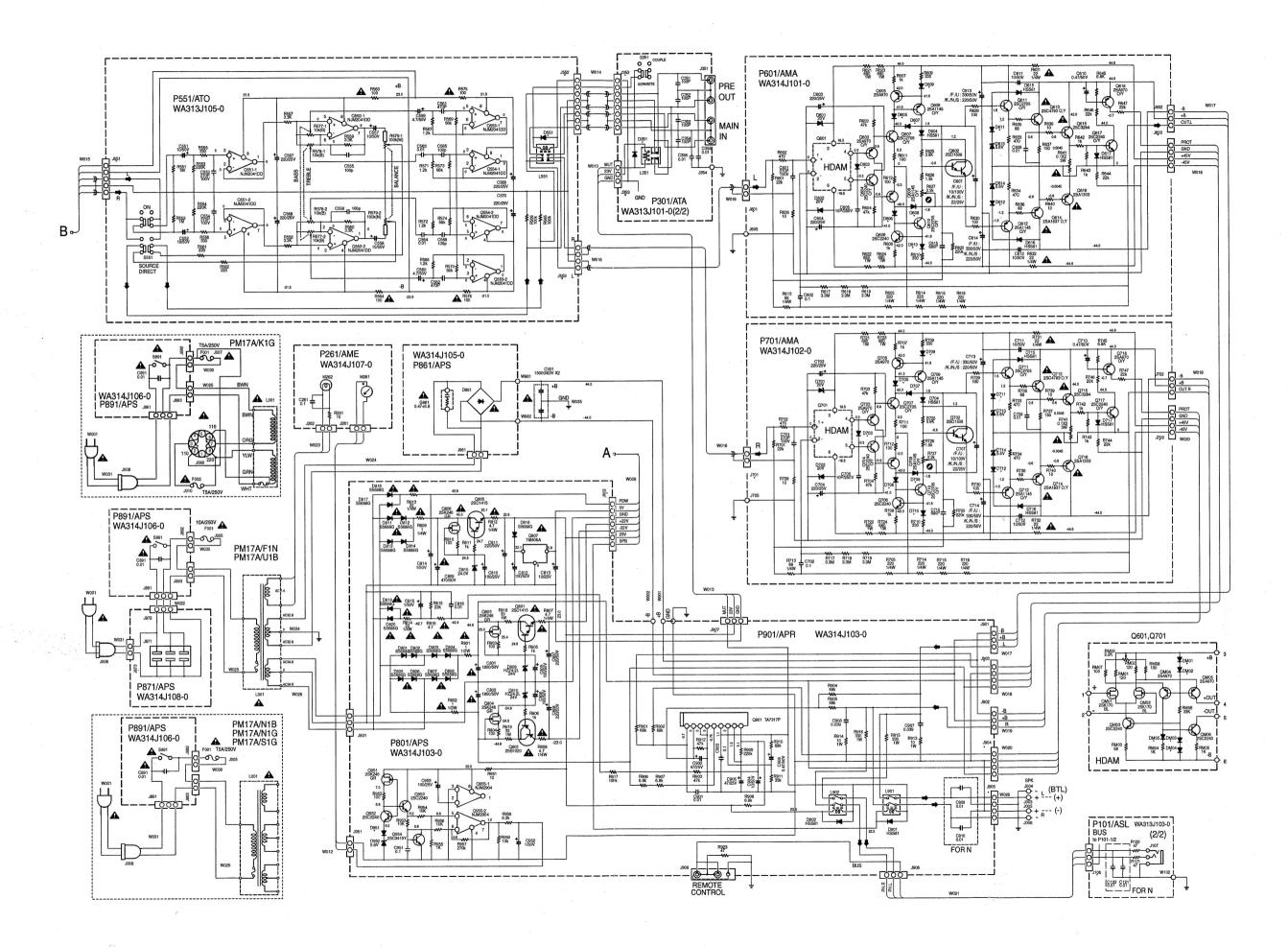
## 3. TEST EQUIPMENT REQURED FOR SERVICING

Item	Use
頁	使用方法
Distortion Analyzer	Distortion measurements
歪率計	歪の測定
Audio Oscillator	Sinewave and squarewave signal source
低周波発振器	正弦波及び矩形波の信号源
AC VTVM	Voltage measurements (AC)
AC VTVM	交流電圧の測定
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
オシロスコープ	波計分析、トラブルシューティング及びASOの調整
DC VTVM	Voltage measurements (DC)
DC VTVM	直流電圧の測定
AC Wattmeter	Monitors primary power to amplifier
交流ワットメーター	アンプの一次側消費電力のモニター
Line Voltmeter	Monitors poterntial of primary power to amplifier
電源電圧計	アンプの一次側消費電圧のモニター
Vanable Autotransformer	Adjust level of primary power to amplifier
スライダック	アンプの一次側電圧の調節
Circuit Tester	Trouble shooting
テスター	トラブルシューティング
Shorting Plug	Shorts amplifier input to eliminate noise pickup
ショート用プラグ	雑音を拾わないようにアンプ入力を短絡する

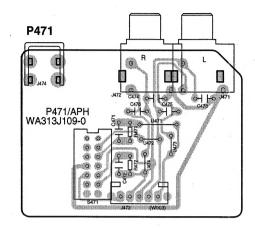
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#### 4. SCHEMATIC DIAGRAM





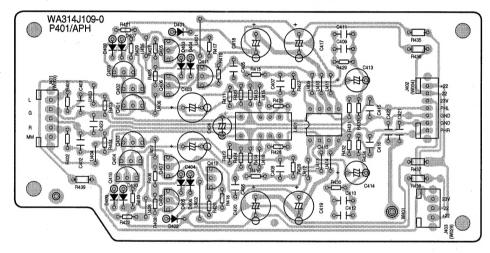
# 5. PARTS LOCATION (Pattern Side)



P401

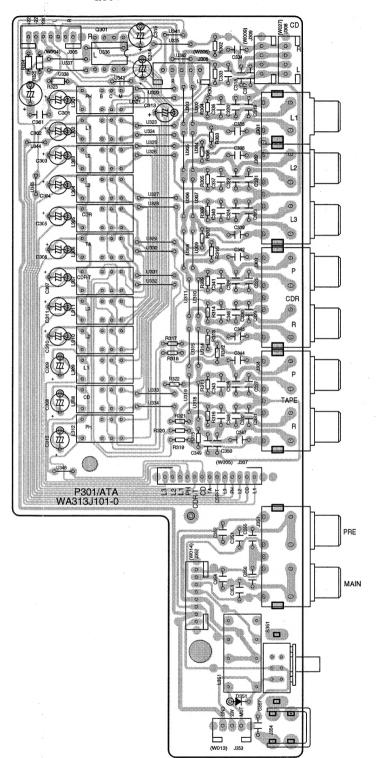
Q401 - Q412

Q413



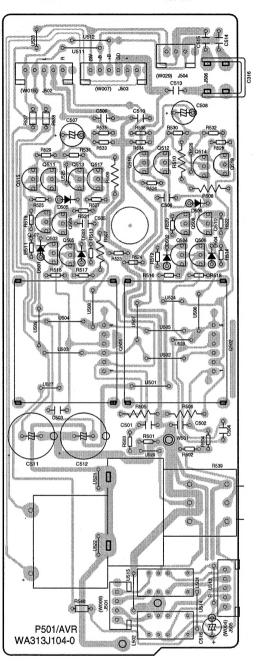
P301

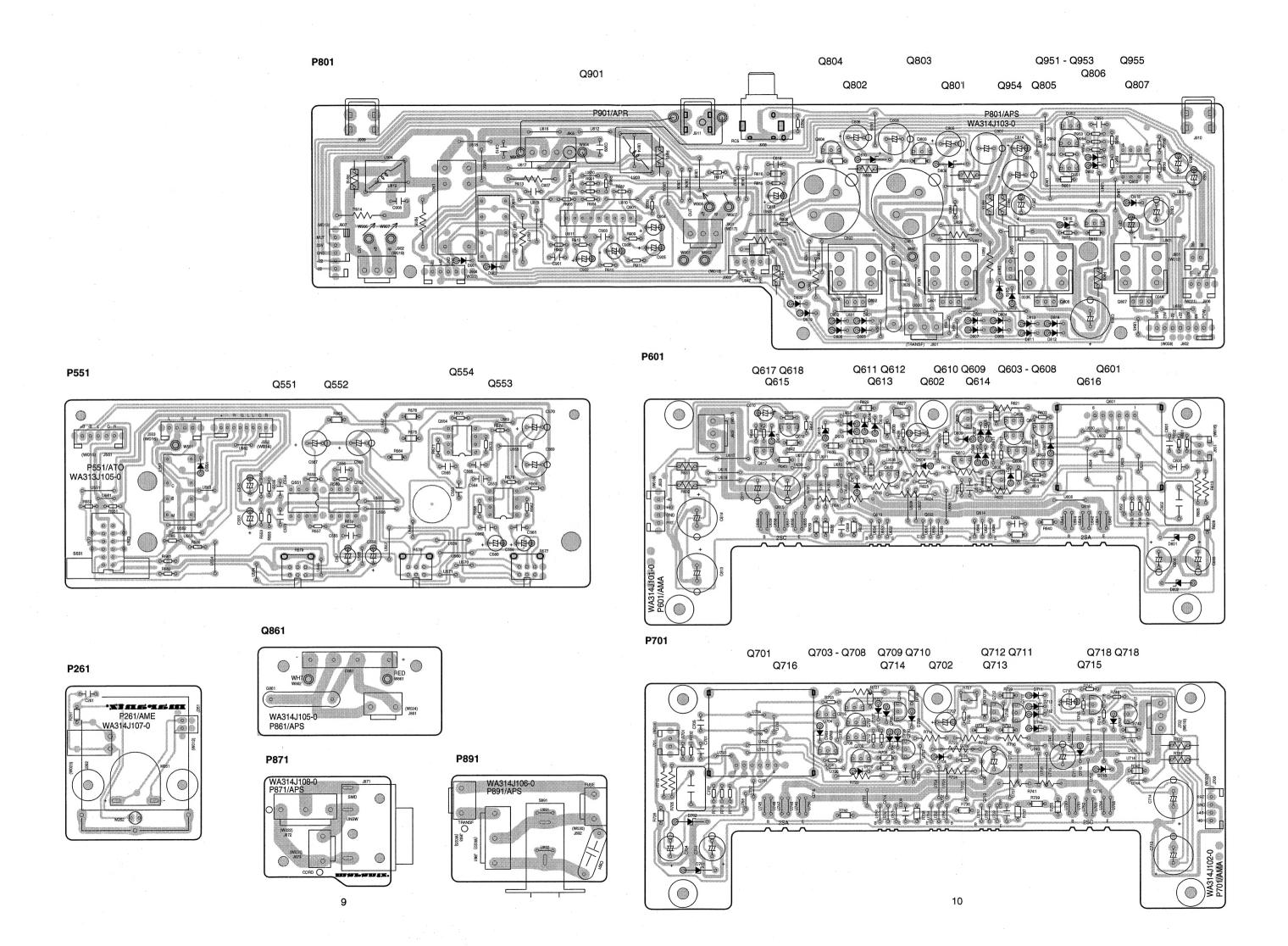
Q301



P501

Q503 - Q517 (Odd number) Q501 Q504 - Q518 (Even number) Q502





P101

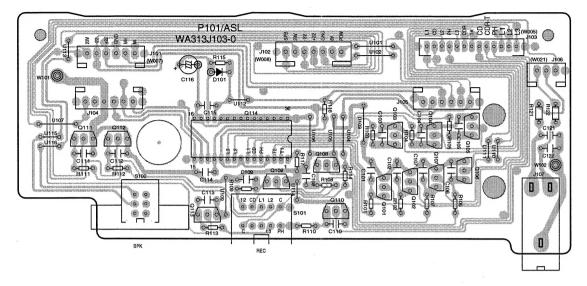
Q111 Q112

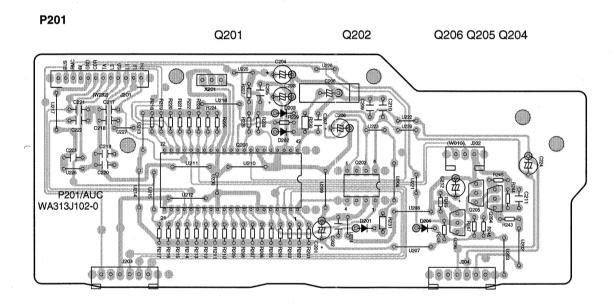
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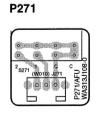
Q113

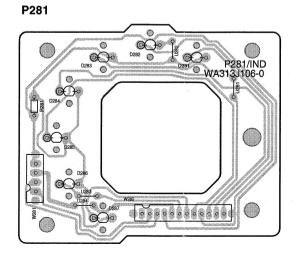
Q114 Q109

Q108 Q110 Q103 Q104 Q105 Q101 Q101 Q106 Q108

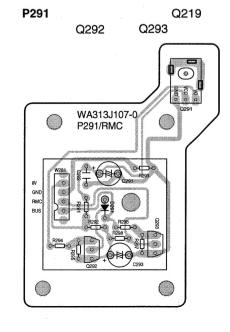






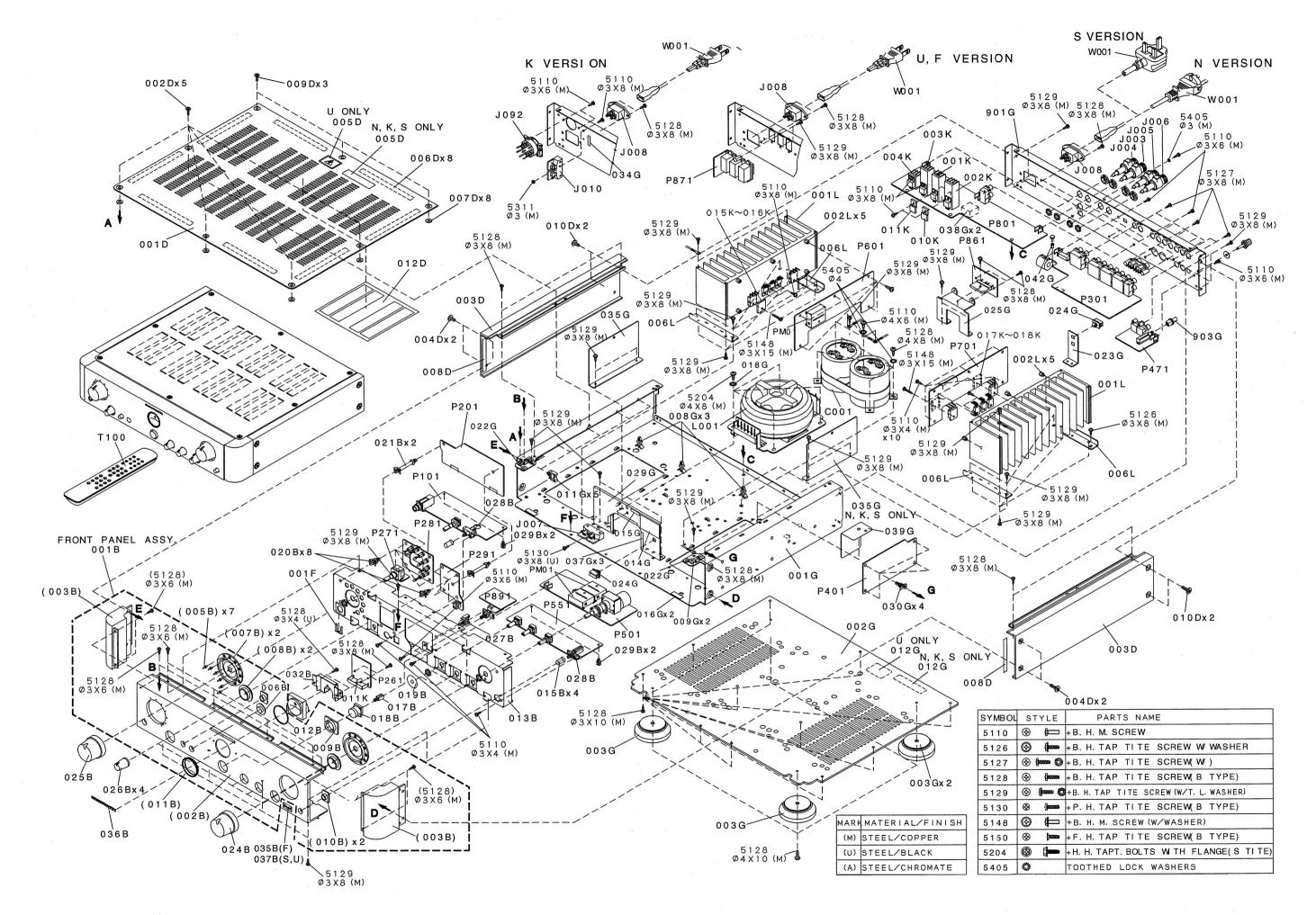


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## **6. EXPLODED VIEW AND PARTS LIST**

			·		_					
POS.	VERS.	PART NO.	DESCRIPTION	PART NO.		POS.	VERS.	PART NO.	DESCRIPTION	PART NO.
NO	COLOR	(FOR PCS)	DESCRIPTION	(ILM)	1	NO	COLOR	(FOR PCS)	DESCRIPTION	(MJI)
				` '	L					. , , ,
001B	/F1N		FRONT PANEL ASSY PM-17SA	313 12//8510		J002		4822 290 81671	TERMINAL 2P RCA PIN GL	YT02021240
0016	// //		GOLD HAIR	3133240310		J002		4822 265 11424	TERMINAL WBT-0745	YT01010360
001B	/K1G,		FRONT PANEL ASSY PM-17SA	2121240550	1	3003		4022,203 11424	POLE TERMINA+E34L RED	1101010300
	/S1G		GOLD BLAST	3133240330	1	J004		4822 265 11425	TERMINAL WBT-0745	YT01010370
	/N1G	9965 000 01834	FRONT PANEL ASSY	313J248530	1	J00 <del>4</del>		4022 203 11423	POLE TERMINAL WHT	1101010370
001B	INIG	9900 000 01834		313J246530	1	IOOE		4000 005 11404		VT01010200
0010	/NI1D	0005 000 01014	PM-17MK2 GOLD BLAST	2121240520	1	J005		4822 265 11424	TERMINAL WBT-0745	YT01010360
001B	/N1B	9965 000 01814	FRONT PANEL ASSY	313J248520	1	1000		4000 005 44405	POLE TERMINAL RED	VT01010270
0010	7.14D		PM-17MK2 BLACK BLAST	242 12405 40	1	J006		4822 265 11425	TERMINAL WBT-0745	YT01010370
001B	/U1B		FRONT PANEL ASSY PM-17SA	313J248540	١,	1007	/F // // /		POLE TERMINAL WHT	V.100000000
0000	0015	1000 100 10107	BLACK BLAST	0001000440	14	J007	/F,/K,/U		JACK FUSE HOLDER	YJ08000600
	GOLD		ESCUTCHEON GOLD	269J063110	1	1007			10A 250V 31.8MM	
	BLACK	4822 426 10496	ESCUTCHEON BLACK	269J063010	ı	J007	/N,/S	4822 267 31818	JACK FUSE HOLDER	YJ08000610
015B	GOLD	4822 410 63898	BUTTON	144J270010	١,	1000			H201 20MM	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
0455	D. 4011		FOR S.D/SPEAKER GOLD	44410770440		J008		4822 265 11399	JACK AC INLET SOT-16C	YJ04002360
015B	BLACK	4822 410 10227	BUTTON	144J270110	14	J010	/K	4822 267 31818	JACK FUSE HOLDER	YJ08000610
			FOR S.D/SPEAKER BLACK		1				H201 20MM	
017B		4822 404 21012	JOINT LINK	025J125010		J092	/K		VOLTAGE SELECT.	BY05080060
			FOR POWER BUTTON		ı				2POLE-2POSITION	
	GOLD		POWER BUTTON GOLD	176J270150	ı	J099	/K		JACK MAINS ADAPTER	YJ04001240
		4822 410 11275	POWER BUTTON BLACK	176J270050	1.					
	GOLD	9965 000 01550	KNOB FOR MAS.VOL GOLD	313J154110		L001	/F		MAINS TRANSFORMER	TS42002120
		9965 000 01549	KNOB FOR MAS. VOL BLACK	313J154010		L001	/K		MAINS TRANSFORMER	TS42002140
	GOLD	9965 000 01552	KNOB FOR INPUT.SEL GOLD	313J154120		L001	/N,/S	9965 000 01558	MAINS TRANSFORMER	TS42002130
		9965 000 01551	KNOB FOR INPUT.SEL BLACK	313J154020	A	L001	/U		MAINS TRANSFORMER	TS42002150
026B	GOLD	4822 410 12036	KNOB	289J154140	1	L002		4822 526 10691	FERRITE CORE TFCK-16-8-13	FC50160030
			FOR BAL/TONE/REC GOLD							
026B	BLACK	4822 410 12035	KNOB	289J154040	A	W001	/F	1	MAINS CORD	ZC01802080
	·		FOR BAL/TONE/REC BLACK						MITY DC-302-J 12A	
035B	/F		SUPER AUDIO BADGE	318J251010	A	W001	/K		MAINS CORD 2P	ZC01803090
036B	GOLD .	9965 000 01554	NEW MARANTZ BADGE GL	313J251110					10A 250V	
036B	BLACK	9965 000 01553	NEW MARANTZ BADGE BL	313J251010	A	W001	/N	4822 321 11439	MAINS CORD 2P	ZC01803080
037B	/S, /U		S A BADGE	313J251020	1				10A 250V CLASS2	
1 1					A	W001	/S		MAINS CORD	ZC01804070
001D	GOLD	4822 442 01018	TOP LID GOLD	269J257110	A	W001	/U		MAINS CORD UL/CSA	ZC01803100
001D	BLACK	4822 442 01017	TOP LID BLACK	269J257010					10A 125V	
	GOLD	4822 502 14425	SCREW FOR TOP LID GOLD	323S010020				,		
002D	BLACK	4822 502 21693	SCREW FOR TOP LID BLACK	323S010030	1				PACKING	
003D	GOLD	4822 426 10499	SIDE PANEL GOLD	269J249110	1	001T	/F		USER GUIDE PM-17SA	313J851110
003D	BLACK	4822 426 10498	SIDE PANEL BLACK	269J249010		001T	/K,/S		USER GUIDE PM-17SA	313J851350
004D	GOLD	4822 502 14425	SCREW	323S010020		001T	/N	9965 000 01555	USER GUIDE PM-17MK2	313J851310
1			FOR SIDE PANEL FRONT GL		1	001T	/U		USER GUIDE PM-17SA	313J851250
		*	,		1	T100		9965 000 01556	REMOTE COMMANDER	ZK313J0010
1 1									RC-17MK2PM	
004D	BLACK	4822 502 21693	SCREW	323S010030					NO TAMES III	
00.5	DEFICIT	.022 002 21000	FOR SIDE PANEL FRONT BL	0200010000					-	
009D	GOLD	4822 502 14462	SCREW	318K010020						
3030	SOLD	1322 302 14402	FOR TOP LID REAR GOLD	3101010020	1					
009D	BIVCA	4822 502 14461	SCREW	318K010030						
0030	PLACK	70LL JUL 14401	FOR TOP LID REAR BLACK	3101010030						
010D	GOLD	4022 ED2 14462		2101/01/020	1					
לטוט	GOLD	4822 502 14462	SCREW	318K010020	1					
0400	DI ACI	4022 502 4 4424	FOR SIDE PANEL REAR GL	210/01000						
010D	BLACK	4822 502 14461	SCREW	318K010030	1					
			FOR SIDE PANEL REAR BL		1					
0000			UB BOTTOMUS	040.105	1				1	
002G			LID BOTTOM LID	313J257020						
003G			LEG LEG	291K057010	1					
903G		4822 410 60343	BUTTON FOR MM/MC SEL.SW.	058J270030	1					
					1					
<b>▲</b> C001		9965 000 01557	ELECT 15000µF 63V X2	EI15906350				.\\		
			FOR AUDIO		1				NOT STANDARD SPARE	
	/F		FUSE 10A 250V MITI GRU	FS11000570	1				PARTS	
		4822 070 35002	FUSE 5A 250V BS LISTED	FS10500850		001S	/F,/U	·	PACKING CASE PM-17SA	313J801010
IA FOO4	/U		FUSE 10A 250V	FS11000530	1	002S			CUSHION FOR LEFT	314J809010
	/U						1 1			
	/K		FUSE T5A 250V BS	FS10500850	1	003S			CUSHION FOR RIGHT	314J809020

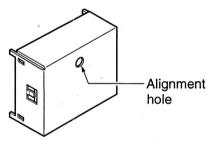


#### 7. DC OFFSET VOLTAGE ALIGNMENT

- 1. Before switching the mains switch. Turn down the master volume to the minimum position and set the balance volume and tone volumes at the center positions. Set variable resistors R627(on the PCB P601:L ch) and R727(on the PCB P701:R ch) fully 2. counterclockwise.
- 2. Connect the digital voltage meter to the speaker terminal. And set the digital voltage meter for the
- 3. Turn the mains switch ON. Put thin adjustment screw driver in to the hole of the HDAM (Q601:L ch / Q701:R ch) copper cover. Adjust variable resistors in the HDAM (Q601:L ch / Q701:R ch) value at 0mV±3mV with in 10 seconds after speaker relay turn ON.

#### DC オフセット雷圧調整

- 1. 本体の電源スイッチを入れるまえに、ボリュームを最小に、 バランス及びトーンコントロールをセンターに合わせます。 P601 基板上のR627 (L ch) 及びP701 基板上のR727 (R ch) の半固定抵抗を反時計回りにしぼりきります。
- 本体背面のスピーカー端子にデジタルボルトメータを接続 します。(レンジは DC に設定する。)
- HDAM(Q601: L ch/Q701: R ch) のカバーにあいた穴に調 整用ドライバーをさし込み、中の半固定抵抗を回せるよう にします。電源スイッチをオンにし、スピーカーリレーが オンになってから10秒以内に半固定抵抗を回しデジタルボ ルトメータの値が0mV±3mVになるように調整します。



#### 8. IDLING CURRENT ALIGNMENT

#### REMARK

Before "Idling current alignment", " DC offset voltage alignment " have to be done!!

- 1. Each of cement resistor R641(on the PCB P601:Lch) and cement resistor R741(on the PCB P701:Rch) are provided with three test points. Connect the digital voltage meter. set for the DC voltage input, to the test points at the two extremities of three test points of R641(L ch) and R741(R ch).
- 2. After the setup above, turn the mains switch ON and 3. heat up the amplifier about 10 minuetes.
- 3. Adjust variable resistors R627(on the PCB P601:L ch) and R727(on the PCB P701:R ch) according to the digital volt meter reading. The target setting value is 9mV±1mV(45mA) for both L ch and R ch.

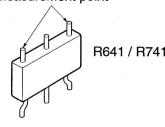
#### アイドリング電流調整

#### 【注意】

アイドリング電流の調整は必ずDCオフセット電圧の調整を終え てから行って下さい。

- P601基板上のセメント抵抗R641(L ch)及びP701基板上の セメント抵抗R741(R ch)の3本の測定用端子のうちの両端 の2本にデジタルボルトメーターを接続します。(レンジは DC に設定する。)
- 電源スイッチをオンにし、アイドリング電流が安定するま で、およそ10分間放置します。
- P601基板上の半固定抵抗R627(L ch)とP701基板上の半固 定抵抗R727(R ch)を時計回りにまわしデジタルボルトメー ターの値が9mV±1mV(45mA)になるように調整します。

#### Measurement point



#### 9. ELECTRICAL PARTS LIST

#### ASSIGNMENT OF COMMON PARTS CODES. RESISTORS

日本本: 1) GD05××× 140, Carbon film fixed resistor, ±5% 1/4W 日本本: 2) GD05××× 160, Carbon film fixed resistor, ±5% 1/6W - Resistance value

#### Examples:

#### (1) Resistance value 0.1 Ω.... 001 10 Ω .... 100 1 kΩ .... 102 100 kΩ .... 104 18 Ω .... 180 2.7 kΩ .... 272 680 kΩ .... 684 $0.5 \Omega .... 005$ 1.0 010 100 Ω .... 101 10 kΩ .... 103 1 MΩ .... 105 $6.8~\Omega$ .... 068 $390~\Omega$ .... 391 $22~k\Omega$ .... 223 $4.7~M\Omega$ .... 475Note: Please distinguish 1/4W from 1/6W by the shape of parts

used actually

#### **CAPACITORS**

```
C***: CERAMIC CAP.
        3) DD1 \times \times \times \times 370,
                                 Ceramic capacitor
                                 Disc type
                                 Temp.coeff.P350 ~N1000, 50V
                             Capacity value
Examples:
```

## 2 Tolerance (Capacity deviation)

```
±0.25 pF .... 0
 ±0.5 pF .... 1
    +5% ... 5
```

\* Tolerance of COMMON PARTS handled here are as follows: 0.5 pF ~ 5 pF .... ±0.25 pF

```
6 pF ~ 10 pF .... ±0.5 pF
       12 pF ∼ 560 pF .... ±5%
③ Capacity value
      0.5 pF .... 005 3 pF .... 030 100 pF .... 101
       1 pF .... 010 10 pF .... 100 220 pF .... 221
```

1.5 pF .... 015 47 pF .... 470 560 pF .... 561

#### C\*\*\* : CERAMIC CAP. 4) DK16 $\times \times \times$ 300,

High dielectric constant ceramic capacito Disc type Temp.chara. 2B4, 50V Capacity value

#### Examples: Capacity value

100 pF .... 101 1000 pF .... 102 10000 pF .... 103 470 pF .... 471 2200 pF .... 222

## C\*\*\*: 5) ELECTROLY CAP. ( 本), 6) FILM CAP. ( 六) 5) EA××××××10, Electrolytic capacitor 5) EA×××××× 10,

One-way lead type, Tolerance ±20% Working voltage Capacity value

#### Examples; (5) Capacity value

0.1 μF 104	4.7 μF 475	100 μF 107
0.33 μF 334	10 µF 106	330 µF 337
1 μF 105	22 µF 226	1100 µF 118
•		2200 µF228

# **6** Working voltage

6.3V .... 006 25V .... 025 10V....010 35V .... 035 16V .... 016 50V .... 050

#### 6) DF15×××350 — Plastic film capacitor One-way type, Mylar One-way type, Mylar ±5% 50V DF16×××310 - Plastic film capacitor One-way type, Mylar ±10% 50V

Capacity value Examples;

#### ⑦ Capacity value 0.001 µF (1000 pF). 102 0.1 µF .... 104 0.0018 µF 182 0.56 µF .... 564 0.01 µF 103 1 µF.... 105 0.015 uF 153

## NOTE: 1) The above CODES (R\*\*\*, R\*\*\*, C\*\*\*, C \*\*\* and C \*\*\*) are omitted on the schematic diagram in some

- 2) On the occasion, be confirmed the common parts on the parts list.
- 3) Refer to "Common Parts List" for the other common parts (RI05, DD4, DK4). 16

#### NOTE ON SAFETY FOR FUSIBLE RESISTOR:

The suppliers and their type numbers of fusible resistors are as follows;

## 1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
NH05 ××× 140	→ RF25S ××××ΩJ	(±5% 1/4W)
NH05 ××× 120	→ RF50S ××××ΩJ	(±5% 1/2W)
NH85 ××× 110. →	RF73B2A $\times \times \times \times \Omega J$	(±5% 1/10W)
NH95 ××× 140 →	RF73B2E $\times \times \times \times \Omega J$	(±5% 1/4W)
* Resista	nce value	esistance value (0.1 $\Omega$ – 10 $k\Omega$ )
2. Matsushita Electron	ic Components Co., L	_td
Part No. (MJI)	Type No. (MEC)	Description

 $NF05 \times \times \times 140$ 

 $RF05 \times \times \times 140$ 

NF02×××140

RF02×××140

#### Examples; \* Resistance value

\*Resistance value

i losistarios ve	aluc		
0.1 Ω 001	10 Ω 100	1 kΩ 102	100 kΩ 104
0.5 Ω 005	18 Ω 180	$2.7 \text{ k}\Omega \dots 272$	680 kΩ 684
1 Ω 010	100 Ω 101	10 kΩ 103	1 MΩ 105
6.8 Ω 068	$390 \Omega 391$	22 kΩ 223	4.7 MΩ 475

ÉRD-2FCJ×××

ERD-2FCG ×××

(±5% 1/4W)

(±2% 1/4W)

\*Resistance value

#### ABBREVIATION AND MARKS ANT. : ANTENNA BATT. : BATTERY CAP. : CAPACITOR CER. : CERAMIC CONN. : CONNECTING DIG. DIGITAL HP **HEADPHONE** MIC. MICROPHONE u-PRO MICROPROCESSOR REC. RECORDING RES. RESISTOR SPK SPEAKER SW TRANSF: TRANSFORMER SWITCH TRIM. : TRIMMING TRS. : TRAMSISTOR VAR. : VARIABLE X'TAL : CRYSTAL

#### **NOTE ON SAFETY:**

Symbol A Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol A . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

#### 安全上の注意:

▲ がついている部品は、安全上重要な部品です。必ず 指定されている部品番号の部品を使用して下さい。

SM970926ACT

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			P101-SW & HP CIRCUIT BOARD		Q201		9965 000 01584	MICROPROCESSOR 4BIT 2K TMP47C200BN-1A68(Z)	HU313JT000
			P101-CAPACITORS		Q202		4822 209 73287	IC LB1630	HC10235030
C101				я	Q204	1.0	4822 130 60839	TRS. 2SC2458 Y OR GR	HT324582B0
5		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010	Q205		4822 130 60839	TRS. 2SC2458 Y OR GR	HT324582B0
C113					Q206		4822 130 60839	TRS. 2SC2458 Y OR GR	HT324582B0
C114		4822 122 40617	CER. 0.1µF +80-20% DC50V	DD38104010					
C115		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010				P201-MISCELLANEOUS	
C116		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10602520	X201		4822 242 72527	CERAMIC VIB. CERALOCK	FQ04004030
	/K,/S	4822 124 12276	FILM $0.01\mu\text{F} \pm 5\%$	OF15103540				CST4.00MGW	
C122	/N	4822 124 12276	FILM 0.01μF ± 5%	OF15103540					
			DANA DEGISTORS	*				P261-METER & LAMP	
		1000 050 40 170	P101-RESISTORS	0.005470100	0001		4000 100 40017	CIRCUIT BOARD	DD20104010
R121		4822 052 10479	47Ω ±5%1/6W	GG05470160	C261		4822 122 40617	CER. 0.1µF +8%-20% DC50V	DD38104010
R122		4822 052 10479	47Ω ±5%1/6W	GG05470160	M261		4822 344 14034	D.C METER MG-28	IM11030030
			P101-RESISTORS (COMMON)		M262		4822 344 14034	LAMP 8V 100mA DC IGN.BLUE	IN1030030
R***			CARBON FILM FIXED RES.		101202		4622 134 40923	LAIVIP 8V 100111A DC IGN.BLUE	IN TOUGOGGO
			±5% 1/6W : R101-R117		▲ R261		4822 052 10109	10Ω ±5%1/6W	GG05100160
			±3% 1/0W . R101-R117		NZO1		4022 032 10103	1022 ±376 170 VV	0003100100
			P101-SEMICONDUCTORS	*				P271-FUNCTION SELECTOR	
D101		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000				CIRCUIT BOARD	
Dioi		4022 130 32302	30V 0.1A	TID EUGO EUGO	R271		4822 050 21021	100Ω ±5%1/4W	GG05101140
			000 0.111		1,427,				
Q101					S271		4822 273 20368	ROTARY SW. SRRSIC	SR01120070
3		4822 130 60588	DIG.TRS.	BA20001000					
Q113			DTC114ES UN4211 10k 10k					P281-INDICATOR LED	
Q114		4822 209 32553	IC LC7822N	HC10309030				CIRCUIT BOARD	
					D281	· ·	4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
			P101-MISCELLANEOUS		D282		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
J107	GOLD	4822 267 31692	JACK HLJ0540-01-410 GRY	YJ01003880	D283		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
J107	BLACK	9965 000 11662	JACK HLJ0540-01-410 BLK	YJ01003870	D284		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
					D285		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
S101		9965 000 01579	ROTARY SW. SRBM16N-F1020		D286		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
S102		9965 000 01580	PUSH SW. SPUP12-2N-*W2	SP02012290	D287		4822 130 80326	L.E.D. LT3D8B RED 30	HI10062320
			DOM II COM CIDCUIT POADD		▲ R281		4822 052 10681	680Ω ±5%1/6W	GG05681160
			P201-U-COM CIRCUIT BOARD P201-CAPACITORS		A RZOI		4022 032 10001	08022 ±3 /6 1/0 W	0000001100
C201		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10602520				P291-IR SENSOR	
C202		4822 122 40617	CER. 0.1µF +8%-20% DC50V	DD38104010				CIRCUIT BOARD	
C203		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10602520	C291		9965 000 00603	ELECT 47µF 10V	EG47601050
C204		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10602520	C292		4822 122 40617	CER. 0.1µF +8%-20% DC50V	DD38104010
C205		4822 122 40617	CER. 0.1µF +8%-20% DC50V	DD38104010	C293		9965 000 00603	ELECT 47µF 10V	EG47601050
C206		4822 124 90406	BIG ELECT FMOH223ZTP16	EX22300530					
C207	1	4822 122 40617	CER. 0.1µF +8%-20% DC50V	DD38104010	D291		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
C208		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10602520				30V 0.1A	
C209		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010					
C210		9965 000 01569	CER. 0.01µF +80%-20% DC50V		Q291		4822 209 16735	PHOTO UNIT PNA4655M00HB	HW1000602
C211		9965 000 01569	CER. 0.01µF +80%-20% DC50V					IR SENSOR	
C212		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10602520	Q292	ľ	4822 130 60107	TRS. 2SA1048 Y OR GR	HT110482B0
C217			AED 444	DD06100111	Q293		4822 130 60839	TRS. 2SC2458 Y OR GR	HT324582B0
}		9965 000 01569	CER. 0.01µF +80%-20% DC50V	ו 0301038טט			1		
C223 C224		4822 124 11947	ELECT 10µF 16V	EQ10601630				P301-INPUT JACK	
			D204 DECICTORS	*				P301-CAPACITORS	
D000		1000 050 10170	P201-RESISTORS	0005470100	0001			P301-CAPACITORS	
R230		4822 052 10479	47Ω ±5%1/6W	GG05470160 GG05022160	C301		4822 124 41543	ELECT. 1µF M 50V RA-2	OA10505020
R231		4822 052 10228	2.2Ω ±5%1/6W	GG05022160	C312		4022 124 41343	ELECT. THE W SOV RA-2	UA 10303020
			P201-RESISTORS (COMMON)		C312		9965 000 01581	ELECT. 22µF M 25V RA-2	OA22602520
R***			CARBON FILM FIXED RES.		C314		9965 000 01581	ELECT. 22µF M 25V RA-2	OA22602520
			±5% 1/6W : R201-R227 R228		C315		4822 124 41535	ELECT. 100µF M 25V RA-2	OA10702520
		1	R229 R246-249 R291-R298		C316		4822 124 41535	ELECT. 100µF M 25V RA-2	OA10702520
			TELO INETO ETO INCO ITICOO	pr:	C317		1000	The control of the co	01110102020
	1		P201-SEMICONDUCTORS		C319		4822 122 40617	CER. 0.1µF +80%-20% DC50V	DD38104010
D201			. 20. SEMOONDOOTORS		C320		10017	52.11 5.1.p. 10070 2070 2070	2230101010
D201	1	4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000		/K,/N,/S			
D203		100 02002	30V 0.1A		5		9965 000 01344	FILM 100pF ±5%100V	OF15101540
5201	1				C348	/K,/N,/S			
	1		-		C349	1	9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD20402040

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PÅRT NO. (MJI)
C350		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010	<b>▲</b> R435		4022 052 40404	1000 150/1/01	0005101100
C351		9965 000 01344	FILM 100pF ±5%100V	OF15101540	<b>▲</b> R438		4822 052 10101	100Ω ±5%1/6W	GG05101160
C354 C355					R439		4822 052 10109	10Ω ±5%1/6W	GG05100160
C361	-	9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010	<u>R***</u>			P401-RESISTORS (COMMON) CARBON FILM FIXED RES. ±5% 1/6W: R401-R404	
R323		4822 052 10228	P301-RESISTORS 2.2Ω ±5%1/6W	GG05022160				R409-R434 R471 R472	
R324		4822 052 10471	470Ω ±5%1/6W	GG05471160				P401-SEMICONDUCTORS	
R325	:	4822 052 10471	470Ω ±5%1/6W	GG05471160	D401		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
R***			P301-RESISTORS (COMMON) CARBON FILM FIXED RES.		D410			30V 0.1A	
			±5% 1/6W : R301-R322	. 91	Q401		4822 130 43547	F.E.T. 2SK369 V	HF203691V0
			P301-SEMICONDUCTORS		Q404			VGDS-40V PD0.4W	
D351		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000	Q405		4000 400 400 40	TDC 2CA270 CD CD D	UT40070280
			30V 0.1A		Q408		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
Q301	٠.	4822 209 16926	IC OPA2604AP BURR-BROWN	HC10008610	Q409				
			2004 1110051   41150110		\ \{\}		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0
J301		4822 290 81598	P301-MISCELLANEOUS TERMINAL 2P RCA JACK YKC21-3255 GOLD	YT02021130	Q412 Q413		4822 209 81565	IC NJM-2041-DD	HC10026090
J302		4822 290 81599	TERMINAL YKC21-3269 GOLD	YT02040970				P401-MISCELLANEOU	
J303		4822 290 81599	TERMINAL YKC21-3269 GOLD	YT02040970	L401		9965 000 01570	RELAY ED2-24	LY20240470
J304 J351		4822 290 81599 4822 290 81599	TERMINAL YKC21-3269 GOLD TERMINAL YKC21-3269 GOLD	YT02040970 YT02040970				P471-PHONO RCA JACK	
		4022 230 01333	TENMINAL TROEF-3203 GOLD	1102040370				CIRCUIT BOARD	
L301		0005 000 01570	DELAY ED2 24	LV20240470	C471		4822 121 70437	P471-CAPACITORS	OF15102540
L312		9965 000 01570	RELAY ED2-24	LY20240470	C471 C472		4822 121 70437	FILM 1000pF ±5%100V APSV FILM 1000pF ±5%100V APSV	OF 15102540
L351		9965 000 01576	RELAY MR82-24USR	LY20240480	C473		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010
S351		9965 000 01582	SLIDE SW. SSSU12	SS02020950	C474		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010
3391		3303 000 01302		3302020300			:	P471-MISCELLANEOUS	
			P401-PHONO AMP CIRCUIT BOARD		J471	•	4822 290 81638	TERMINAL 14X14 RA 1L1P BLK AU FLM-GND	Y102010790
			P401-CAPACITORS		J472		4822 290 81638	TERMINAL 14X14 RA 1L1P BLK	YT02010790
C401		9965 000 01560	FILM 270pF ±5%100V OFC	OF55271540	6474		4000 070 40400	AU FLM-GND	CD04040CC0
C402 C403		9965 000 01560 9965 000 01567	FILM 270pF ±5%100V OFC ELECT. 100µF 10V ARA	OF55271540 OA10701050	S471	IK IN IS	4822 276 13409 4822 158 60606	PUSH SW. SPUP19-4N-W2.0 CHOKE COIL 22µH 5R200PN	SP04010660 LC12030050
C404		9965 000 01567	ELECT. 100µF 10V ARA	OA10701050	U474		4822 158 60606	CHOKE COIL 22µH 5R200PN	LC12030050
C409		4822 124 12276	FILM $0.01\mu\text{F} \pm 5\%$	OF15103540					
C410		4822 124 12276	FILM 0.01µF ± 5%	OF15103540				P501-MASTER VOL. & AMP	
C411 C412		4822 121 70437 4822 121 70437	FILM 1000pF ±5%100V APSV FILM 1000pF ±5%100V APSV	OF15102540 OF15102540				CIRCUIT BOARD P501-CAPACITORS	
C413		4822 124 81151	ELECT. 22µF 25V ARA	OA22602550	C501		9965 000 01560	FILM 270pF ±5%100V OFC	OF55271540
C414		4822 124 81151	ELECT. 22µF 25V ARA	OA22602550	C502		9965 000 01560	FILM 270pF ±5%100V OFC	OF55271540
C415		9965 000 01568	FILM 1500pF ±5%100V APSV	OF15152540	C503		9965 000 01585	MICA 5pF 500V FE922H	DF31050520
C416 C417		9965 000 01568	FILM 1500pF ±5%100V APSV	OF15152540	C504 C505		9965 000 01585 9965 000 01586	MICA 5pF 500V FE922H MICA 22pF ±5%500V FE	DF31050520 DF35220520
5		4822 124 90365	ELECT. 220µF M 25V RA-2	OA22702520	C505		9965 000 01586	MICA 22pF ±5%500V FE	DF35220520
C420					C507	/F,/U		ELECT. 22µF 25V ARA	OA22602550
C421		4822 122 40617	CER. 0.1µF DC50V +80 -20%	DD38104010	C507		9965 000 02015	ELECT. 22µF 25V ARS	OA22602540
C422 C423		4822 122 40617 4822 122 40617	CER. 0.1µF DC50V +80 -20% CER. 0.1µF DC50V +80 -20%	DD38104010 DD38104010	C508 C508	/F,/U /K /N /S	9965 000 02015	ELECT. 22µF 25V ARA ELECT. 22µF 25V ARS	OA22602550 OA22602540
C423		4822 124 41543	ELECT. 1µF M 50V RA-2	OA10505020	C508	Chimin	4822 124 90051	ELECT. 220µF M 25V ARA	OA22002540
•	'		·		C512		4822 124 90051	ELECT. 220µF M 25V ARA	OA22702550
0.1.1.1			P401-CAPACITORS (COMMON)		C513		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010
C***		1	PLASTIC FILM CAPACITOR		C514		9965 000 01569	CER. 0.01µF +80%-20% DC50V	DD38103010
			±5% 50V : C504-C408		C515 C516		9965 000 01569 4822 124 41543	CER. 0.01µF +80%-20% DC50V ELECT. 1µF M 50V RA-2	DD38103010 OA10505020
D405			P401-RESISTORS						
R405		9965 000 01571	$100\Omega \pm 1\% \ 1/6W$	GM11610000	R505		9965 000 01565	P501-RESISTORS   $68\Omega \pm 1\%$ 1/4W ERD	NR01680140
R408		3303 000 0 371	170 170 170 170 170 170 170 170 170 170	CW11010000	R506		9965 000 01565	$68\Omega \pm 1\% \text{ 1/4W ERD}$	NR01680140
	1 .								

POS.	VERS.	PART NO.	DESCRIPTION	PART NO.	POS.	VERS.	PART NO.	DESCRIPTION	PART NO.
NO	COLOR	(FOR PCS)	DEGOKA TION	(MJÍ)	NO	COLOR	(FOR PCS)	DESONAL TION	(MJI)
R507		4822 111 20413	220Ω ± 1% 1/4W ERD	NR01221140	R579		4822 100 30138	VAR. 100kΩ MN FOR BALANCE VOLUME	RM01041310
R510 R537 R538 R539 R540		4822 052 10479 4822 052 10479 9965 000 01587 4822 052 10228	$47\Omega$ ±5%1/6W $47\Omega$ ±5%1/6W VAR. RK18112MC-30K DX2 2.2Ω ±5%1/6W	GG05470160 GG05470160 RM03030050 GG05022160	R***			P551-RESISTORS (COMMON) CARBON FILM FIXED RES. ±5% 1/6W: R551-R562 R565-R574	
R***	-	.01	P501-RESISTORS (COMMON) CARBON FILM FIXED RES. ±5% 1/6W: R501-R505		D551		4822 130 32362	<b>P551-SEMICONDUCTORS</b> DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
			R511-R536 P501-SEMICONDUCTORS		Q551 } Q554		4822 209 81565	IC NJM-2041-DD	HC10026090
D501		4022 420 22262	DIODE 100176 MA16E 1003EA	HD20002000				P551-MISCELLANEOUS	
D506	-	4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000	L551		9965 000 01576	RELAY MR82-24USR	LY20240480
Q501 Q502			IC NEW HDAM IC NEW HDAM	KH313J1010 KH313J1010	S551		4822 276 13065	PUSH SW. SPUP24V1A STROK=2MM NON-SHORT	SP04010650
Q503		4822 130 62649 4822 130 42949 4822 130 42949	F.E.T. 2SJ74 BL VGDS=25V PD=24W TRS. 2SA970 GR OR BL TRS. 2SA970 GR OR BL	HF100741G0 HT109702A0 HT109702A0	C601		9965 000 01560	P601-POWER AMP L CIRCUIT BOARD P601-CAPACITORS FILM 270pF ±5%100V OFC	OF55271540
Q509 Q510 Q511		4822 130 43233 4822 130 43233 4822 130 42949	TRS. 2SC2240 GR OR BL TRS. 2SC2240 GR OR BL TRS. 2SA970 GR OR BL	HT322402A0 HT322402A0 HT109702A0	C602 C603 C604		4822 121 10867   4822 124 90365   4822 124 90365	FILM 0.1µF ±5%100V OFC ELECT. 220µF M 25V RA-2 ELECT. 220µF M 25V RA-2	OF55104540 OA22702520 OA22702520
Q512 Q513		4822 130 42949 4822 130 43233	TRS. 2SA970 GR OR BL TRS. 2SC2240 GR OR BL	HT109702A0 HT322402A0		/F,/U	9965 000 01561	MICA 10pF ± 0.5pF 500V FE ELECT. 10µF M 100V RA-2	DF31100520 OA10610020
Q514 Q515 Q516		4822 130 43233 4822 130 43283 4822 130 43283	TRS. 2SC2240 GR OR BL TRS. 2SC2705 O OR Y TRS. 2SC2705 O OR Y	HT322402A0 HT327052A0 HT327052A0	C607 C608 C610	IK,IN,IS	9965 000 02015 4822 124 12276 4822 124 22273	ELECT. 22µF M 25V ARS FILM 0.01µF ± 5% ELECT. 0.47µF M 50V RA-2	OA22602540 OF15103540 OA47405020
Q517 Q518		4822 130 42999 4822 130 42999	TRS. 2SA1145 O OR Y TRS. 2SA1145 O OR Y	HT111452A0 HT111452A0	C611 C612 C613	/F /11	9965 000 01562 9965 000 01562	ELECT 10µF M 50V RA2BP ELECT 10µF M 50V RA2BP ELECT. 330µF M 50V RA-2	EQ10605090 EQ10605090 OA33705020
L501 L502		9965 000 01570 9965 000 01570	P501-MISCELLANEOUS RELAY ED2-24 RELAY ED2-24	LY20240470 LY20240470	C613 C614	/K,/N,/S /F,/U	9965 000 02014 9965 000 02014 9965 000 01564	ELECT. 220μF M 50V ARS ELECT. 330μF M 50V RA-2 ELECT. 220μF M 50V ARS FILM 680pF ±5%100V OFC	OA22705040 OA33705020 OA22705040 OF55681540
C551 C552 C553 C554 C555 C556 C557 C558 C559 C560 C561		5322 124 21731 5322 124 21731 9965 000 01560 9965 000 01560 9965 000 01344 9965 000 01344 5322 124 21731 5322 124 21731 5322 124 21731 4822 124 80067 4822 124 80067 9965 000 01583 9965 000 01583	P551-TONE AMP CIRCUIT BOARD P551-CAPACITORS ELECT. 10μF M 50V RA-2 ELECT. 10μF M 50V RA-2 FILM 270pF ±5%100V OFC FILM 270pF ±5%100V OFC FILM 100pF ±5%100V FILM 100pF ±5%100V ELECT. 10μF M 50V RA-2 ELECT. 10μF M 50V RA-2 ELECT. 4.7μF M 50V RA-2 FILM 0.047μF ±5%50V MTFV FILM 0.047μF ±5%50V MTFV	OA10605020 OA10605020 OF55271540 OF55271540 OF15101540 OF15101540 OA10605020 OA47505020 OA47505020 OA47505020 OF15473040 OF15473040	R605 A R607 A R608 A R609 A R610 R613 R614 R615 R616 R617 R618 R619		4822 111 20413 4822 052 10102 4822 052 10102 4822 111 31001 4822 111 31001 9965 000 01565 4822 111 20413 4822 111 20413 4822 111 20413 4822 050 23308 4822 050 23308 4822 050 23308	P601-RESISTORS $220\Omega \pm 1\% \ 1/4W \ ERD$ $1k\Omega \pm 5\% \ 1/6W$ $1k\Omega \pm 5\% \ 1/6W$ $330\Omega \pm 5\% \ 1/6W$ $330\Omega \pm 5\% \ 1/6W$ $68\Omega \pm 1\% \ 1/4W \ ERD$ $220\Omega \pm 1\% \ 1/4W \ ERD$ $220\Omega \pm 1\% \ 1/4W \ ERD$ $220\Omega \pm 1\% \ 1/4W \ ERD$ $230\Omega \pm 1\% \ 1/4W \ ERD$ $3.3M\Omega \pm 5\% \ 1/6W$ $3.3M\Omega \pm 5\% \ 1/6W$ $3.3M\Omega \pm 5\% \ 1/6W$	NR01221140 GG05102160 GG05102160 GG05331160 GG05331160 NR01680140 NR01221140 NR01221140 NR01221140 GD05335160 GD05335160
C563 C564		4822 124 12276 4822 124 12276	FILM 0.01μF ± 5% FILM 0.01μF ± 5%	OF15473540 OF15103540 OF15103540	\$ R624		4822 053 10681	680Ω ±5%1W	GA05681010
C565 C566 C567		9965 000 01344 9965 000 01344	FILM 100pF ±5%100V FILM 100pF ±5%100V	OF15101540 OF15101540	R627 R628 R629		9965 000 01566 4822 052 10109 4822 052 10101	TRIM. VARIABLE 2.2k $\Omega$ 10 $\Omega$ ±5%1/6W 100 $\Omega$ ±5%1/6W	RA02220760 GG05100160 GG05101160
C567 C570		4822 124 90365	ELECT. 220μF M 25V RA-2	OA22702520	R630 A R631 A R632		4822 052 10101 4822 050 22209	100Ω ±5%1/6W 22Ω ±5%1/4W	GG05101160 GG05220140
<b>▲</b> R563			P551-RESISTORS		R633 R634		4822 050 22209 4822 052 10471 4822 052 10471	22Ω ±5%1/4W   470Ω ±5%1/6W   470Ω ±5%1/6W	GG05220140 GG05471160 GG05471160
∫ <b>A</b> R576 R577		4822 052 10101 4822 101 30735	100Ω ±5%1/6W VAR. 10kΩ X2 B	GG05101160 RM01030720	R635 R636 ▲ R637		4822 050 26809 4822 050 26809 4822 052 10151	$68\Omega \pm 5\% 1/6W$ $68\Omega \pm 5\% 1/6W$ $150\Omega \pm 5\% 1/6W$	GG05680160 GG05680160 GG05151160
R577 R578		4822 101 30735	VAR. 10kΩ X2 B	RM01030720	R638 R639		4822 052 10101	JUMPER JUMPER WIRE 5MM 10Ω ±5%1/6W	75060501P0 GG05100160

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POS.	VERS.	PART NO.	DESCRIPTION	PART NO.	POS.	VERS.	PART NO.	DESCRIPTION	PART NO.
NO	COLOR	(FOR PCS)		(MJI)	NO	COLOR	(FOR PCS)		(MJI)
R640		4822 052 10109	10Ω±5%1/6W	GG05100160	D705		4000 444 00440	P701-RESISTORS	ND04004440
▲ R641		4822 111 91402	FIXED 0.10Ω x 2 3W	BZ10102010	R705		4822 111 20413	220Ω ± 1% 1/4W ERD	NR01221140
R642		4822 052 10102	1kΩ ±5%1/6W	GG05102160	<b>▲</b> R707		4822 052 10102	1kΩ ±5%1/6W	GG05102160
R643		4822 052 10102	1kΩ ±5%1/6W	GG05102160	<b>▲</b> R708		4822 052 10102	1kΩ ±5%1/6W	GG05102160
			Dans DEGISTORS (20111011)		▲ R709		4822 111 31001	330Ω ±5%1/6W	GG05331160
R***			P601-RESISTORS (COMMON)	1	<b>▲</b> R710		4822 111 31001	330Ω ±5%1/6W	GG05331160
10000		,	CARBON FILM FIXED RES.		R713		9965 000 01565	$68\Omega \pm 1\%  1/4W  ERD$	NR01680140
			±5% 1/6W : R601-R604 R611		R714		4822 111 20413	220Ω ± 1% 1/4W ERD	NR01221140 NR01221140
		N/	R612 R620 R625 R626		R715		4822 111 20413	$220\Omega \pm 1\% 1/4W ERD$	NR01221140 NR01221140
			R644-R647		R716		4822 111 20413	220Ω ± 1% 1/4W ERD	GD05335160
			P601-SEMICONDUCTORS		R717 R718		4822 050 23308 4822 050 23308	3.3MΩ ±5%1/6W 3.3MΩ ±5%1/6W	GD05335160 GD05335160
DC01		4022 120 02205	ZENER DIODE HZ20L-1	HD30020010	R719		4822 050 23308	3.3MΩ ±5%1/6W	GD05335160
D601		4822 130 83385 4822 130 83385	ZENER DIODE HZ20L-1	HD30020010	R721		4622 030 23306	3.3IVIS2 ±3 70 170 VV	GD03333100
D602					K/21	1)	4022 052 10601	680Ω ±5%1W	GA05681010
D603		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000		1	4822 053 10681	00052 ±370 I W	GA0300 10 10
DEM		4022 120 00027	- 3 1 21111 1	UD20027010	R724		0065 000 01566	TRIM. VARIABLE 2.2kΩ	RA02220760
D604		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010	R727 R728		9965 000 01566	10Ω±5%1/6W	GG05100160
D605		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000	R728		4822 052 10109 4822 052 10101	100Ω ±5%1/6W	GG05100160 GG05101160
D612		7022 130 32302	30V 0.1A	11020002000	R729		4822 052 10101	100Ω ±5%1/6W	GG05101160 GG05101160
D612		4822 130 33948	ZENER DIODE 5.6V	HD30561000	♣ R731		4822 050 22209	22Ω ±5%1/4W	GG05101100 GG05220140
D613		4822 130 33948	ZENER DIODE 5.6V	HD30561000	▲ R732		4822 050 22209	$22\Omega \pm 5\% 1/4W$ $22\Omega \pm 5\% 1/4W$	GG05220140 GG05220140
D614 D615		4822 130 33946	DIODE HSS81TD 150V 150mA	HD20027010	R733		4822 052 10471	470Ω ±5%1/6W	GG05220140 GG05471160
D615		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010	R734		4822 052 10471	470Ω ±5%1/6W	GG05471160 GG05471160
D617		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010	R735		4822 050 26809	68Ω ±5%1/6W	GG05680160
5017		1022 130 00037	DIODE 1133011D 130V 130IIIA	11020027010	R736		4822 050 26809	68Ω ±5%1/6W	GG05680160
K601			TRS. KIT 2SA1837 & 2SC4793	HK183719C0	<b>▲</b> R737	0	4822 052 10151	150Ω ±5%1/6W	GG05151160
1,001		7	HFE SELECTED RANK	111(10371300	R738		1022 002 10101	JUMPER WIRE 5MM	75060501P0
Q601			IC NEW HDAM	KH313J1010	R739		4822 052 10109	10Ω ±5%1/6W	GG05100160
Q602	· .	4822 130 60526	TRS. 2SD1508	HT415080A0	R740		4822 052 10109	10Ω ±5%1/6W	GG05100160
9002		1022 100 00020	DARLINGTON TR.HFE>4000	11110000110	<b>▲</b> R741	-	4822 111 91402	0.10OHMX2 3W	BZ10102010
Q603		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0	R742		4822 052 10102	1kΩ ±5%1/6W	GG05102160
Q604		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0	R743		4822 052 10102	1kΩ ±5%1/6W	GG05102160
Q605		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0		1			
Q606		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0				P701-RESISTORS (COMMON)	
Q607		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0	<u>R***</u>			CARBON FILM FIXED RES.	
Q608		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0				±5% 1/6W : R701-R704 R711	
Q609		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0				R712 R720 R725 R726	
Q610		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0				R744-R747	
Q611	1	4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0					
Q612		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0				P701-SEMICONDUCTORS	
<b>▲</b> Q613		4822 130 63635	TRS. 2SC4793 O Y	HT347932A0	D701		4822 130 83385	ZENER DIODE HZ20L-1	HD30020010
<b>▲</b> Q614		4822 130 63634	TRS. 2SA1837 O Y	HT118372A0	D702		4822 130 83385	ZENER DIODE HZ20L-1	HD30020010
▲ Q615		4822 130 60741	TRS. 2SC3284 O P Y	HT332843D0	D703		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
			125W FMG112					30V 0.1A	
<b>▲</b> Q616	9 1	4822 130 63674	TRS. 2SA1303 O P Y	HT113033D0	D704		4822 130 80837	DIODE HSS81TD 150V 150MA	HD20027010
			125W FMG112		D705				
Q617	l .	4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0	}		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
Q618		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0	D712	1		30V 0.1A	
					D713		4822 130 33948	ZENER DIODE 5.6V	HD30561000
l	l		P701-POWER AMP R	1	D714		4822 130 33948	ZENER DIODE 5.6V	HD30561000
			CIRCUIT BOARD		D715		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010
			P701-CAPACITORS		D716		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010
C701		9965 000 01560	FILM 270pF ±5%100V OFC	OF55271540	D717		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010
C702		4822 121 10867	FILM 0.1µF ±5%100V OFC	OF55104540	I				
C703		4822 124 90365	ELECT. 220µF M 25V RA-2	OA22702520	K701			TRS. KIT 2SA1837 & 2SC4793	HK183719C0
C704		4822 124 90365	ELECT. 220µF M 25V RA-2	OA22702520				HFE SELECTED RANK	1010
C705		9965 000 01561	MICA 10pF ± 0.5pF 500V FE	DF31100520	Q701			IC NEW HDAM	KH313J1010
C707			ELECT. 10µF M 100V RA-2	OA10610020	Q702		4822 130 60526	TRS. 2SD1508	HT415080A0
	/K,/N,/S	9965 000 02015	ELECT. 22µF M 25V ARS	OA22602540		1		DARLINGTON TR.HFE>4000	LITACONCO
C708		4822 124 12276	FILM 0.01µF ± 5%	OF15103540	Q703		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
C710	}	4822 124 22273	ELECT. 0.47μF M 50V RA-2	OA47405020	Q704	1	4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0
C711		9965 000 01562	ELECT 10µF M 50V RA2BP	EQ10605090	Q705		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
C712	<b></b>	9965 000 01562	ELECT 10µF M 50V RA2BP	EQ10605090	Q706		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0
C713		0005 000 000	ELECT. 330µF M 50V RA-2	OA33705020	Q707		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0
		9965 000 02014	ELECT. 220µF M 50V ARS	OA22705040	Q708		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0
		0005 000 0001	ELECT. 330µF M 50V RA-2	OA33705020	Q709		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0
	/K,/N,/S	9965 000 02014	ELECT. 220µF M 50V ARS	OA22705040	Q710		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0
C715	1	9965 000 01564	FILM 680pF ±5%100V OFC	OF55681540	Q711		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0
I	1				Q712	1	4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0

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POS.	VERS.	PART NO.	DESCRIPTION	PART NO.	POS.	VERS.	PART NO.	DESCRIPTION	PART NO.
NO	COLOR	(FOR PCS)		(MJI)	NO	COLOR	(FOR PCS)		(MJI)
A 0712		4022 120 62625	TDC 2CC4702 O V	HT347932A0				P801-SEMICONDUCTORS	
<b>▲</b> Q713 <b>▲</b> Q714		4822 130 63635 4822 130 63634	TRS. 2SC4793 O Y TRS. 2SA1837 O Y	HT118372A0	<b>▲</b> D801	-		POUT-SEMICONDUCTORS	
▲ Q715		4822 130 60741	TRS. 2SC3284 O P Y	HT332843D0	5		4822 130 80839	DIODE S5688G	HD20029050
	.		125W FMG112		▲ D808			VRM=400V I0=1A	
Q716		4822 130 63674	TRS. 2SA1303 O P Y	HT113033D0	D809		4822 130 10851	ZENER DIODE HZ24-2L	HD30012010
0717		4822 130 43233	125W FMG112 TRS. 2SC2240 GR OR BL	HT322402A0	D810		4822 130 10851	ZENER DIODE HZ24-2L	HD30012010
Q717 Q718		4822 130 42949	TRS. 2SC2240 GR OR BL	HT109702A0	D811		4822 130 80839	DIODE S5688G	HD20029050
"								VRM=400V I0=1A	
		1	P801-POWER SUPPLY &		D812		4822 130 80839	DIODE S5688G	HD20029050
			PROTECTOR CIRCUIT BOARD		▲ D813		4822 130 80839	VRM=400V I0=1A DIODE S5688G	HD20029050
C801		9965 000 01577	P801-CAPACITORS ELECT 1800µF 50V	EB18805020	D013		4022 130 00039	VRM=400V 10=1A	HD20029030
0001		3303 000 01377	FOR AUDIO	LD10000020	<b>▲</b> D814		4822 130 80839	DIODE S5688G	HD20029050
C802		9965 000 01577	ELECT 1800µF 50V	EB18805020				VRM=400V I0=1A	
			FOR AUDIO	0.140705000	D815		4822 130 80116	ZENER DIODE 24V	HD32401000
C805 C806		4822 124 90355 4822 124 90355	ELECT. 100µF M 50V RA-2 ELECT. 100µF M 50V RA-2	OA10705020 OA10705020	<b>▲</b> D816		4822 130 80839	EQUIVALENT DIODE S5688G	HD20029050
C807		4822 124 90366	ELECT. 100µF M 50V RA-2	OA10705020 OA22705020	1- 5010		1022 130 00039	VRM=400V I0=1A	1020023030
C808		4822 124 90366	ELECT. 220µF M 50V RA-2	OA22705020	▲ D817		4822 130 80839	DIODE S5688G	HD20029050
C809	ľ	4822 124 41542	ELECT. 470µF M 50V RA-2	OA47705020				VRM=400V I0=1A	Limacon
C810		4822 124 41535	ELECT. 100µF M 25V RA-2	OA10702520	D818		4822 130 80839	DIODE S5688G VRM=400V I0=1A	HD20029050
C811 C812		4822 124 90366 4822 124 90355	ELECT. 220μF M 50V RA-2 ELECT. 100μF M 50V RA-2	OA22705020 OA10705020	<b>▲</b> D819		4822 130 80839	DIODE S5688G	HD20029050
C812		4822 124 41534	ELECT. 10µF M 25V RA-2	OA10703020		1	.522 150 50055	VRM=400V I0=1A	
C814		4822 124 41543	ELECT. 1µF M 50V RA-2	OA10505020	▲ D820		4822 130 80839	DIODE S5688G	HD20029050
C815		4822 124 41543	ELECT. 1µF M 50V RA-2	OA10505020	D.004		1000 100 00007	VRM=400V I0=1A	11000007040
C816 C901		4822 124 12276 4822 124 12276	FILM $0.01\mu F \pm 5\%$ FILM $0.01\mu F \pm 5\%$	OF15103540 OF15103540	D901 D902		4822 130 80837 4822 130 80837	DIODE HSS81TD 150V 150mA DIODE HSS81TD 150V 150mA	HD20027010 HD20027010
C902		4822 124 22698	ELECT. 47μF M 25V RA-2	OA47602520	D951		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20027010
C903		4822 122 40617	CER. 0.1µF +8%-20% DC50V	DD38104010				30V 0.1A	
C904		5322 124 21731	ELECT. 10µF M 50V RA-2	OA10605020	D952		4822 130 33948	ZENER DIODE 5.6V	HD30561000
C905		4822 124 22698	ELECT. 47µF M 25V RA-2	OA47602520				EQUIVALENT	
C906 C907		4822 124 22273 9965 000 01575	ELECT. 0.47µF M 50V RA-2 FILM 0.039µF ±5%100V OFC	OA47405020 OF55393540	<b>▲</b> Q801		4822 130 11605	TRS. 2SD1415	HT41415100
C908		9965 000 01575	FILM 0.039µF ±5%100V OFC	OF55393540	▲ Q802		4822 130 11604	TRS. 2SB1020	HT21020100
	/K,/N,/S	4822 124 12276	FILM $0.01 \mu F \pm 5\%$	OF15103540	Q803		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
	/K,/N,/S	4822 124 12276	FILM 0.01µF ± 5%	OF15103540	Q804	1	4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
C951 C952		4822 122 40617 4822 124 41543	CER. 0.1µF +8%-20% DC50V ELECT. 1µF M 50V	DD38104010 OA10505020	<b>▲</b> Q805 Q806		4822 130 11605 4822 130 42836	TRS. 2SD1415 F.E.T. 2SK246 GR	HT41415100 HF202461C0
C952		4822 124 41535	ELECT. 100µF M 25V RA-2	OA10303020	<b>▲</b> Q807		4822 209 83821	IC NJM78M06FA	HC38506090
1					Q901		4822 209 83312	IC TA7317P	HC10042050
			P801-RESISTORS		Q951		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
▲ R801 ▲ R802		4822 050 21108	1Ω ±5%1/2W 1Ω ±5%1/2W	GG05010120 GG05010120	Q952 Q953		4822 130 43233 4822 130 43233	TRS. 2SC2240 GR OR BL TRS. 2SC2240 GR OR BL	HT322402A0 HT322402A0
▲ R803		4822 050 21108 4822 052 10101	100Ω ±5%1/6W	GG05010120 GG05101160	Q953 Q954		4822 130 60117	TRS. 2SC3419 Y 40V 0.8A	HT334191Y0
▲ R804		4822 052 10101	100Ω ±5%1/6W	GG05101160				PC=1.2W 5W	
▲ R807		4822 050 24708	4.7Ω ±5%1/4W	GG05047140	Q955		4822 209 83679	IC NJM2904 DUAL OP-AMP	HC10030090
<b>A</b> R808		4822 050 24708	4.7Ω ±5%1/4W	GG05047140 GG05010140	1			P801-MISCELLANEOUS	
<b>▲</b> R809 <b>▲</b> R810		4822 117 10158 4822 052 10101	$1Ω \pm 5\%1/4W$ $100Ω \pm 5\%1/6W$	GG05010140 GG05101160	<b>▲</b> G801		4822 121 20263	CAP,COMP. 0.47μF + 6.8Ω	BF47400010
▲ R812		4822 050 24708	$4.7\Omega \pm 5\%1/4W$	GG05101100 GG05047140				NOISE KILLER	27 100010
<b>▲</b> R813		4822 113 90119	FUSE 22Ω G 1/4W	NF02220140	J908		4822 267 41009	TERMINAL 2P RCA PIN JACK	YT02020890
<b>▲</b> R814		4822 113 90119	FUSE 22Ω G 1/4W	NF02220140	L801		4822 158 60605	FERRIT BEADS B-01-RT	FC90050060
<b>A</b> R816 <b>A</b> R818		4822 052 10478 4822 053 10339	4.7Ω ±5%1/6W 33Ω ±5%1W	GG05047160 GA05330010	L901		4822 280 70354	RELAY VB 24MBU-510 5A/240VAC	LY20240310
▲ R819		4822 053 10339	33Ω ±5%1W	GA05330010 GA05330010	L902		9965 000 01576	RELAY MR82-24USR	LY20240480
R913		4822 053 10109	10Ω ±5%1W	GA05100010	L905		4822 158 60605	FERRIT BEADS B-01-RT	FC90050060
R914		4822 053 10109	10Ω ±5%1W	GA05100010	U804		4822 158 60605	FERRITE BEADS B-01-RT	FC90050060
R917		4822 053 10331	330Ω ±5%1W	GA05331010	1			DOG1 DECTIFIED	
R918 R951		4822 053 10331 4822 052 10109	330Ω ±5%1W  10Ω ±5%1/6W	GA05331010 GG05100160			_ 1	P861-RECTIFIER CIRCUIT BOARD	
1 1331		1022 002 10109	1048 TO 10 1/0 W	3500100100	▲ D861		9965 000 01578	DIODE D25XB60	HE20029290
			P801-RESISTORS (COMMON)					600V 25A BRIDGE-DI	
R***			CARBON FILM FIXED RES.		<b>▲</b> G861		4822 121 20263	CAP.COMP. 0.47μF + 6.8Ω	BF47400010
			±5% 1/6W : R805 R806 R811 R815 R817 R901-R912 R923		1			NOISE KILLER	
			R952-R959		1				
					1				

ſ	POS.	VERS.	PART NO.	DESCRIPTION	PART NO.
Ļ	NO	COLOR	(FOR PCS)		(MJI)
	<b>▲</b> J871	/F,/U	482226731417	P871-AC-OUTLET CIRCUIT BOARD [/F,/U VERSION] JACK AC OUTLET CCT1306-0212	YJ04001840
	<b>▲</b> C891 S891		4822 121 43732 4822 276 12647	P891-POWER SW CIRCUIT BOARD FILM 0.1µF M 250V AC PUSH SW. POWER ESB-99753V-4 TV-8	DF77103500 SP01011470
	RM09 <u>R***</u>		4822 100 20681	PM01-HDAM CIRCUIT BOARD FOR Q501 Q502 Q601 Q701 PM01-RESISTOR TRIM. 2.2kΩ RH0638C14R PM01-RESISTORS (COMMON) CARBON FILM FIXED RES.	RA02220780
١			-	±5% 1/6W : RM01-RM08	
	DM01 { DM05		4822 130 32362	PM01-SEMICONDUCTORS  DIODE 1SS176 A165 1SS254 30V 0.1A	HD20002000
	QM01		5322 130 41844	F.E.T. 2SK170 BL	HF201701G0
	QM02		5322 130 41844	VGDS=-40V PD=0.4V F.E.T. 2SK170 BL	HF201701G0
	QM03 QM04 QM05 QM06		4822 130 43233 4822 130 42949 4822 130 42949 4822 130 43233	VGDS=-40V PD=0.4V TRS. 2SC2240 GR OR BL TRS. 2SA970 GR OR BL TRS. 2SA970 GR OR BL TRS. 2SC2240 GR OR BL	HT322402A0 HT109702A0 HT109702A0 HT322402A0
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